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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,947	05/25/2001	Peter J. Fritz	55758USA4A.002	6660

7590 07/29/2002

Attention: Gregory D. Allen
Office of Intellectual Property Counsel
3M Innovative Properties Company
P. O. Box 33427
St. Paul, MN 55133-3427

EXAMINER

NGUYEN, DUNG V

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 07/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,947

Applicant(s)

FRITZ ET AL.

Examiner

Dung V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 25 (in fig. 3). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "26" has been used to designate both central aperture and fibers (in Fig. 2 and 3). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Stout et al (USPN 5,316,812). Block et al disclose an abrasive article 10 comprising a backing plate 12 having a first major surface and a second major surface opposite the first major surface,

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wherein the backing plate 12 includes a central aperture extending therethrough, an abrasive layer 14 secured to the first major surface of the backing plate 12, a fastener 18 press fitted to the backing plate 12 so as to defined the central aperture, an adhesive disposed between the abrasive layer 14 and the first major surface of the backing plate 12, wherein the backing plate is generally circular, wherein the abrasive layer is comprised of nonwoven abrasive layer, wherein the fastener is a quick-change type.

Block et al also disclose a method of making an abrasive article comprising applying adhesive to a backing plate 12 having a central aperture, wherein the backing plate 12, disposing abrasive material onto the adhesive, disposing the backing plate 12 onto a jig 70, disposing a fastener 18 having tines 32 so as to be concentric with the central aperture, pushing the tines 32 through the backing plate 12 and folding the tines 32 so as to fixably attach the fastener 18 to the backing plate 12. Block et al also inherently disclose a method of abrading a surface comprising providing an abrasive article described above, attaching the abrasive article 10 to a shaft 24 through the central aperture of the abrasive article 10, contacting a portion of the abrasive article 10 with a surface of a workpiece, moving the abrasive article 10 relative to the surface of the workpiece (note Fig. 1-9, col. 1, lines 8-31, col. 4, lines 3-46, col. 5, line 40 to col. 6, line 45). However, Block et al do not disclose the backing plate comprises a thermoplastic binder material and fibrous reinforcing material, wherein the thermoplastic binder material includes polyamide or polyester, the fibrous reinforcing material comprises glass fibers, the backing plate comprises of glass-filled nylon, the backing plate has a thickness of from about 0.51 mm to about 1.78 mm, about 1.02mm to about 1.40 mm or

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about 1.27 mm. Stout et al disclose a backing plate comprises a thermoplastic binder material and fibrous reinforcing material, wherein the thermoplastic binder material includes polyamide or polyester, the fibrous reinforcing material comprises glass fibers, the backing plate comprises of glass-filled nylon, the backing plate has a thickness of from about 0.5 mm to about 1.2 mm, or less than about 1.50 mm (note Fig. 1 and 2, col. 2, lines 23-61, col. 5, lines 15-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the abrasive article of Block et al with the backing plate as disclosed by Stout et al in order to provide a plate that not substantially deform or disintegrate during use.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Hettes (USPN 5,752,876). Block et al disclose the claimed invention as described above, however, Block et al do not disclose the article is a flap disc. Hettes discloses a flap disc article 100 (note Fig. 3, abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the article of Block et al with a flap disc as disclosed by Hettes in order to increase life and efficiency of the abrasive article.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Tinnerman (USPN 2,156,002). Block et al disclose the claimed invention as described above, however, Block et al do not disclose the fastener is shaped to form a Tinnerman nut. Tinnerman discloses a fastener to form a Tinnerman nut (note Fig. 1-4, col. 1, line 41 to col. 2, line 38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to

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modify the article of Block et al with a Tinnerman nut as disclosed by Tinnerman in order to increase the strength of the fastener.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of van Buren Jr. (USPN 4,245,438). Block et al disclose the claimed invention as described above, however, Block et al do not disclose the fastener is shaped to form a Grit-lock nut. Van Buren Jr. discloses a fastener is shaped to form a Grit-lock nut (note Fig. 1-5, col. 4, line 1 to col. 5, line 30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the article of Block et al with a Grit-lock nut as disclosed by van Buren Jr. in order to provide quick-release hub assembly for an abrasive article.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wells and Reiling et al are cited to show attachments for abrasive articles.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

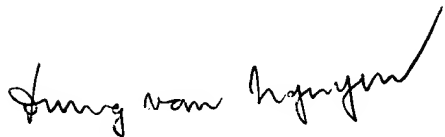
10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

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11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

DVN

July 24, 2002

A handwritten signature in cursive script, appearing to read "Dung van Nguyen", with a long, sweeping flourish extending from the end.

Dung Van Nguyen
Patent Examiner